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Examiner: David Lukton
Art Unit: 1654

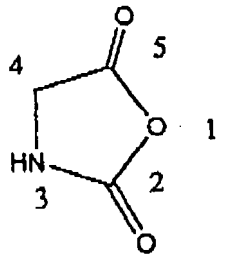
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

Claims 1-15 (canceled)

Claim 16 (previously presented) A method of polymerizing an aminoacid-N-carboxyanhydride monomer wherein the N-carboxyanhydride monomer comprises the following ring:



said method comprising:

(a) combining a first NCA monomer with an initiator molecule complex comprised of:

(i) a low valent metal capable of undergoing an oxidative addition reaction wherein the oxidative addition reaction formally increases the oxidation state of the low valent metal by two electrons; and

(ii) an electron donor comprising a Lewis base;

(b) allowing the initiator molecule complex to:

(i) open the ring of the first NCA through oxidative addition across either the O-C_5 or O-C_2 anhydride bond;

(ii) combine with a second NCA monomer, to form a polyaminoacid chain containing a first amido containing metallacycle; and

(c) allowing a third NCA monomer to combine with the first amido containing metallacycle so that:

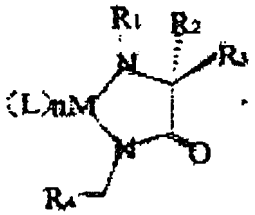
(i) the amido nitrogen of the first amido containing metallacycle attacks the carbonyl carbon of the NCA and the third NCA is added to the polyaminoacid chain; and

(ii) a second amido containing metallacycle is generated.

Claim 17 (currently amended) A method of adding an aminoacid-N-carboxyanhydride to a polyaminoacid chain having an amido containing metallacycle end group comprising:

providing the aminoacid-N-carboxyanhydride, and

adding the polyaminoacid chain bearing the mettallacycle end group, wherein the polyaminoacid chain bearing the mettallacycle end group is of the general formula:



wherein M is the low valent transition metal;

L is the Lewis Base ligand;

~~R1, R2 and R3~~ R_1, R_2, and R_3 comprises a side chain of an amino acid selected from the group consisting of alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine and valine;

~~R4~~ R_4 is the polyaminoacid chain, and n is an integer from 1 to 4.

Claim 18 (currently amended) The method of claim 16 wherein ~~the efficiency of~~ the initiator molecule complex's polymerization efficiency is influenced ~~controlled~~ by ~~allowing the reaction to proceed in a solvent selected for its ability to influence the reaction.~~ use of an appropriate solvent.

Claim 19 (original) The method of claim 17 wherein the solvent is selected from the group consisting of ethyl acetate, toluene, dioxane, acetonitrile, THF and DMF.

Claim 20 (currently amended) The method of claim 16, wherein the [α-] aminoacid-N-carboxyanhydride monomer is selected from the group consisting of alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine and valine.

Claims 21-62 (canceled)